

REMARKS

Claims 1, 3, 4, 6, 7 and 9-52 are pending in this application. Claims 1, 4, 7, 10, 14, 17, 21, 25, 29, 32, 37, 43 and 46 are independent.

Rejection Under 35 U.S.C. § 102(b)

Claims 1, 3, 4, 7, 9-11, 13, 14, 17-22, 24-34, 37, 38, 40, 41 and 43-52 are rejected under 35 U.S.C. § 102(b) as being anticipated by Doi Japanese Patent No. JP 2000312708 (“Doi”).

The present invention is directed to substantially uniformly irradiating articles having irregular characteristics such as an irregular geometrical configuration or an irregular density. The articles are disposed in a closed container which is moved past a radiation source, and the fixture is disposed externally relative to the container. Radiation from the source is directed toward the articles in the container such that the radiation energy is absorbed in accordance with the irregularities in the characteristics of the articles at the different positions to maintain the radiant energy at the different positions in the articles within particular limits.

Doi teaches an electron beam irradiation device for uniformly irradiating the subject of sterilization 15 without being affected by the shape of the subject of irradiation 15. The uniform irradiation is achieved using a dose adjuster 10. However, contrary to the principles of the present invention, Doi fails to teach an electron beam irradiation device, wherein the articles to be irradiated are disposed within a closed container during irradiation. Moreover, Doi fails to disclose an electron beam irradiation device, wherein the fixture is disposed externally to a closed container that houses the articles to be irradiated.

Independent claims 1, 4, 37 and 43 of the invention have been amended to recite that: (1) the container is a closed container; (2) the article is disposed within the closed container; and (3) the fixture is disposed external to the closed container. Doi does not teach any of these limitations and therefore fails to anticipate claims 1, 4, 37 and 43. Furthermore, Doi does not disclose maintaining the radiation dose at the different positions in the article within particular minimum and maximum limits, as required by claims claims 1, 4, 37 and 43.

Independent claims 7, 10, 17, 21, 25, 29, 32 and 46 of the invention have been amended to recite that: (1) the container is a closed container; (2) the article is disposed within the closed container; and (3) the fixture is disposed external to the closed container. As discussed hereinabove, Doi does not teach any of these limitations and therefore fails to anticipate claims 7, 10, 17, 21, 25, 29, 32 and 46. Furthermore, Doi does not disclose maintaining the radiation dose at the different positions in the article within particular minimum and maximum limits, as required by claims 7, 29, 40 and 43.

In view of the above, it is respectfully submitted that Doi fails to anticipate claims 1, 3, 4, 7, 9-11, 13, 14, 17-22, 24-34, 37, 38, 40, 41 and 43-52.

Rejections Under 35 U.S.C. § 103(a)

Claims 6, 12, 15 and 35 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Doi. Claims 6, 12, 15 and 35 depend from independent claims 4, 10, 14 and 32, respectively. Doi is distinguished from independent claims 4, 10, 14 and 32 as provided hereinabove.

In view of the above, it is respectfully submitted that Doi fails to render obvious claims 6, 12, 15 and 35.

Claims 16 and 36 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Doi in view of Peck et al. U.S. Patent No. 5,590,602 ("Peck"). Claims 16 and 36 depend from independent claims 14 and 32, respectfully. Doi is distinguished from independent claims 14 and 32 as provided hereinabove. Peck fails to cure the deficiencies of Doi.

In view of the above, it is respectfully submitted that Doi in view of Peck fails to render obvious claims 16 and 36.

Claims 23, 39 and 42 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Doi in view of Ichihara U.S. Patent No. 6,030,554 ("Ichihara"). Claims 23 depends from independent claim 21, while claims 39 and 42 depend from independent claim 37. Doi is distinguished from independent claims 21 and 37 as provided hereinabove. Ichihara fails to cure the deficiencies of Doi.

In view of the above, it is respectfully submitted that Doi in view of Ichihara fails to render obvious claims 23, 39 and 42.

Conclusion

It is believed this amendment now has placed the application in condition for allowance. If necessary, the Commissioner is hereby authorized in this and concurrent replies to charge payment (or credit any overpayment) to Deposit Account No. 50-0683 of Luce, Forward, Hamilton & Scripps.

Respectfully submitted,

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